NOKIA 8800/8801

RM-13/RM-33

Transceiver characteristics:

- **Band:**
  - 8800 RM13: Tri-band phone for GSM 900/1800/1900MHz
  - 8801 RM-33: Tri-band phone for GSM 850/1800/1900MHz
- **Camera:** Integrated SVGA camera 0,5 Megapixel
- **Display:** Active matrix color display with 262.144 colors, resolution 208 x 208 pixel
- **Bluetooth**
- **FM radio**
- **Vibra Alert:** Small round Vibra motor
- **Connector:** Easy Flash connector

Transceiver with BL-5X 600mAh Li-Ion battery pack

Talk time	Standby	Note
1,5 h –3 h	Up to 8 days	Depends on network parameters

Environmental characteristics:

- Lead-free soldered

SERVICE MANUAL

Service Level 1&2

Copyright © 2005 NOKIA Corporation. All rights reserved.

TABLE OF CONTENT

Page

1. INTRODUCTION 3
2. GENERAL REPAIR INFORMATION 4
3. PATHFINDER FOR WORKSHOP STAFF 5
4. EXPLODED VIEW AND COMPONENT DISPOSAL 6
5. SPARE PARTS OVERVIEW 7
6. SPARE PARTS LIST 8
7. SERVICE TOOLS 9
8. SW-UPDATE 11
9. DISASSEMBLY INSTRUCTIONS 12
10. LEGEND FOR QUICK TROUBLE SHOOTER 16
11. QUICK TROUBLE SHOOTER PART 1 17
12. QUICK TROUBLE SHOOTER PART 2 18
13. CAMERA GONOGO TEST 19
14. BLUETOOTH 20
15. GONOGO TEST 21
16. BATTERY TEST 21
17. FORWARDING OF REPAIRS 22
18. ESD PROTECTION REQUIREMENTS 23

CHANGE HISTORY

Status	Version No.	Date	Comments
Draft	0.1	07.04.2005	Initial draft
Approved	1.0	09.05.2005	Approval
Approved	2.0	15.07.2005	8801 RM-33 added

Copyright © 2005 NOKIA Corporation. All rights reserved.

1. INTRODUCTION

The purpose of this document is to help NOKIA service levels 1 and 2 workshop technicians to carry out service to NOKIA products. This Service Manual is to be used **only** by authorized NOKIA service suppliers, and the content of it is confidential. Please note that NOKIA provides also other guidance documents (e.g. Service Bulletins) for service suppliers, follow these regularly and comply with the given instructions.

While every endeavor has been made to ensure the accuracy of this document, some errors may exist.
If you find any errors or if you have further suggestions, please notify NOKIA using the address below:
mailto:cc-ts-rc.documentation@NOKIA.com

Please keep in mind also that this documentation is continuously being updated and modified, so watch always out for the newest version.

Warnings and Cautions

Please refer to the phone's user guide for instructions relating to operation, care and maintenance including important safety information. Note also the following:

Warnings:

1. CARE MUST BE TAKEN ON INSTALLATION IN VEHICLES FITTED WITH ELECTRONIC ENGINE MANAGEMENT SYSTEMS AND ANTI–SKID BRAKING SYSTEMS. UNDER CERTAIN FAULT CONDITIONS, EMITTED RF ENERGY CAN AFFECT THEIR OPERATION. IF NECESSARY, CONSULT THE VEHICLE DEALER/MANUFACTURER TO DETERMINE THE IMMUNITY OF VEHICLE ELECTRONIC SYSTEMS TO RF ENERGY.
2. THE HANDPORTABLE TELEPHONE MUST NOT BE OPERATED IN AREAS LIKELY TO CONTAIN POTENTIALLY EXPLOSIVE ATMOSPHERES EG PETROL STATIONS (SERVICE STATIONS), BLASTING AREAS ETC.
3. OPERATION OF ANY RADIO TRANSMITTING EQUIPMENT, INCLUDING CELLULAR TELEPHONES, MAY INTERFERE WITH THE FUNCTIONALITY OF INADEQUATELY PROTECTED MEDICAL DEVICES. CONSULT A PHYSICIAN OR THE MANUFACTURER OF THE MEDICAL DEVICE IF YOU HAVE ANY QUESTIONS. OTHER ELECTRONIC EQUIPMENT MAY ALSO BE SUBJECT TO INTERFERENCE.

Cautions:

1. Servicing and alignment must be undertaken by qualified personnel only.
2. Ensure all work is carried out at an anti–static workstation and that an anti–static wrist strap is worn.
3. Use only approved components as specified in the parts list.
4. Ensure all components, modules screws and insulators are correctly re–fitted after servicing and alignment.
5. Ensure all cables and wires are repositioned correctly.

Electrostatic discharge can easily damage the sensitive components of electronic products. Therefore every Service Supplier has to take care of all precautions, which are mentioned in the service level related "Service Partner Requirements", available on NOKIA Online. Also see ESD Protection Requirements in this Service Manual.

Copyright © 2005 NOKIA Corporation. All rights reserved.

2. GENERAL REPAIR INFORMATION

In this section the technician will get some general hints how to carry out repairs:

- To familiarize oneself with NOKIA product read the tutorials or user guide on www.NOKIA.com -->Support--> Phones, by selecting the Phone Model.
- Before starting the repair you must take care of ESD precautions like being in your ESD Protected Area and connecting your wristband.
- Use gloves to avoid corrosion and fingerprints.
- Protect windows and displays with a film to avoid dust and scratches.
- When cleaning the LCD Module any lint-free cloth can be used (e.g. Micro-Fibre cloth).
- When cleaning the pads you have to use a soft cloth/ESD brush and Isopropanol. It is not allowed to use a glass fiber pencil because it scratches the surface and will lead later on to corrosion.
- Mechanical parts (except shielding lids and bent parts), which didn't repair the failure, can be reused, if they are not soldered.
- When removing the shielding lids make sure to replace them with new ones, otherwise the high-frequency leakage can have an influence on the device.
- Always use original NOKIA spare parts.
- Check the soldering joints of the parts, which are concerned regarding the indicated error (e.g. soldered connectors or switches) and resolder them if necessary (Level 2 only).
- Remove redundant soldering flux after repair.
- Meet the torque requirements when assembling the unit (see also the document "torques for transceiver assembly" on NOKIA Partner Web Site/NOKIA Online).
- Always use your own equipment for testing where you are sure that it works. E.g. if the customer complains about charger function, please test the phone with your own charger to be sure if phone or charger causes the malfunction.
- A SIM card is needed for all GoNoGo tests.
- When doing the fault log entries, always note the Item code, which caused the malfunction. Also, fill in the appropriate part code from the assembly, if needed.
- Please be aware that some malfunctions could be software related and solved by an update.

- There are several documents available on NOL, which have to be followed:

- First, take care for the latest content pages of Service Bulletins, which are always available for each folder on NOKIA Online. This is also important to recognize, if existing documents have become invalid.

- The service level indicator at the bottom of each document tells the appropriate destination.

Downloads > Support Library >

1. **Instructions**
2. **General Service Bulletins**
3. **Product related documents**
4. **Spare Part Service Bulletins**
5. **Service Tools Service Bulletins**
6. **Common Software Service Bulletins**

   etc,...

Use General SB-217 as a reference or overview.

Please also check NOKIA Online (NOL) for latest news and files on a regular basis.

Copyright © 2005 NOKIA Corporation. All rights reserved.

3. PATHFINDER FOR WORKSHOP STAFF

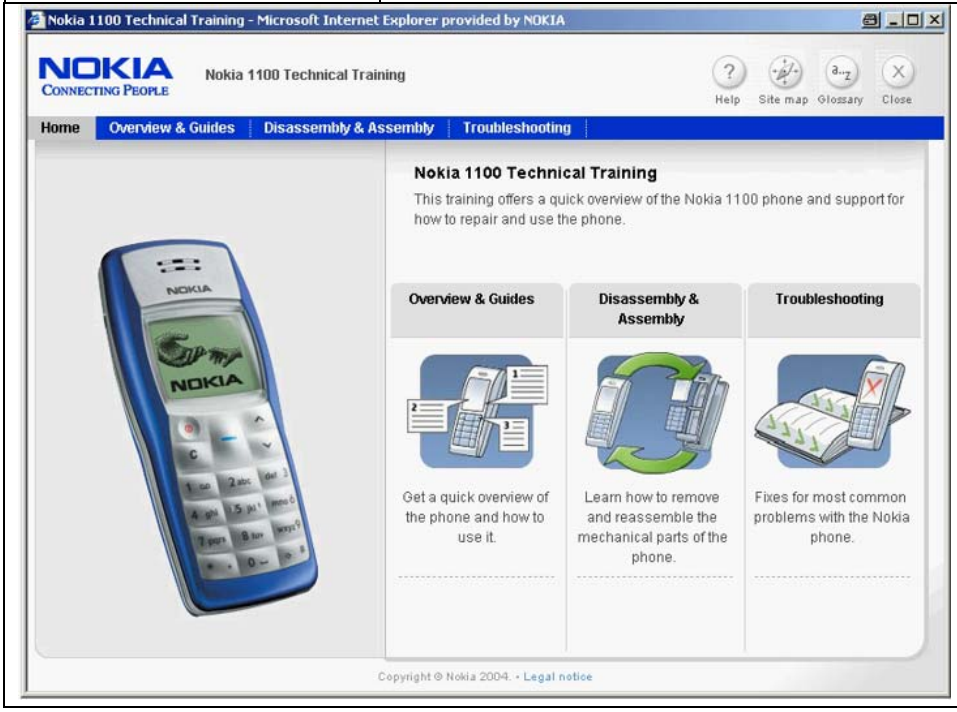
In addition to the information in this Service Manual, there are several instructions and information, which have to be followed. Main documentation database is NOKIA Online with the purpose of serving different multimedia content, like video clips or interactive tutorials.

It is mandatory to watch for newest technical and organizational information on a daily basis to be updated as required (see **"Latest files in Support Library"**). Every new information has to be processed and implemented as soon as possible.
When logged into NOL you can also find needed information in different folder like:

Support Library → **Phones** →
Service Manuals
Service Bulletins
Software
Repair Information

Level 1&2 e-learning (former NOKIA CarePoint) on NOKIA Online

Former NOKIA CarePoint content, such as	• **Online Troubleshooting** • **Product informations** • **Videos – Disassembly/Assembly**	can be found on **NOKIA Online**


Nokia 1100 Technical Training - Microsoft Internet Explorer provided by NOKIA
NOKIA
CONNECTING PEOPLE
Nokia 1100 Technical Training
Help
Site map
Glossary
Close
Home
Overview & Guides
Disassembly & Assembly
Troubleshooting
Nokia 1100 Technical Training
This training offers a quick overview of the Nokia 1100 phone and support for how to repair and use the phone.
Overview & Guides
Disassembly & Assembly
Troubleshooting
Get a quick overview of the phone and how to use it.
Learn how to remove and reassemble the mechanical parts of the phone.
Fixes for most common problems with the Nokia phone.
Copyright © Nokia 2004. • Legal notice

NOKIA Online
↓
Care Services
↓
Training
↓
Phone Models

Level 1&2 e-learning courses offer a quick overview of the NOKIA phone and support for how to repair and use the phone:

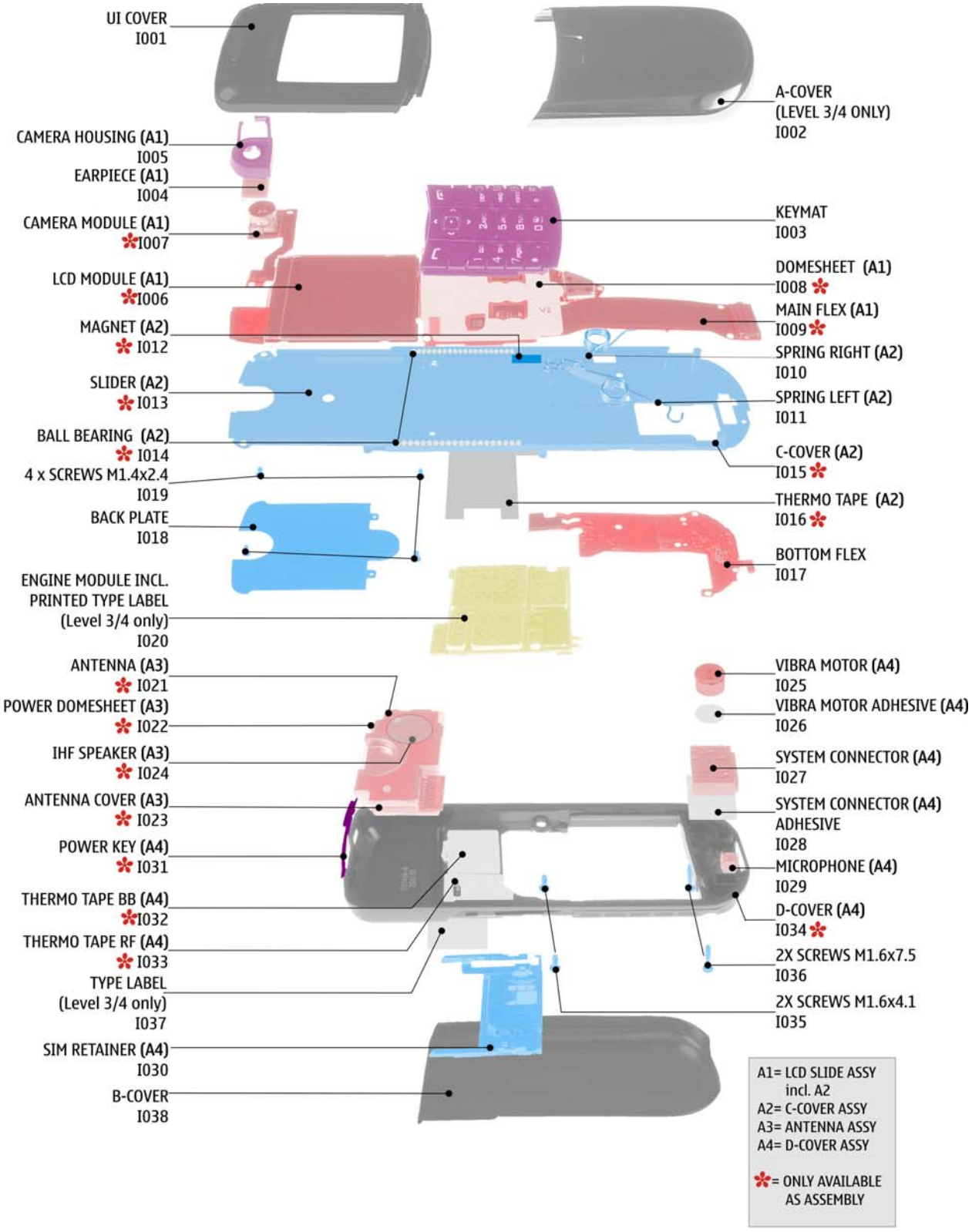
Overview & Guides	**Disassembly & Assembly**	**Troubleshooting**
Basic information about the phone, features and technologies	Instructions to disassemble and assemble the phone	Step-by-step instructions on how to locate and repair the most common problems with the phone

To reduce the server traffic it is recommended to download newest version of huge files like videos, Phoenix packages or Service Manuals only once and distribute it internally for further use.

Copyright © 2005 NOKIA Corporation. All rights reserved.

4. EXPLODED VIEW AND COMPONENT DISPOSAL

Recommendation for the ecologically friendly disposal of components. Colorized components show the different categories. See corresponding ITEM/CIRCUIT REF in the Spare Parts Service Bulletins on NOL.



ELECTRO SILICONE METAL PLASTIC PWB COVER

Copyright © 2005 NOKIA Corporation. All rights reserved.

5. SPARE PARTS OVERVIEW

A1 = LCD SLIDE ASSY
EARPIECE (A1) I004
CAMERA HOUSING (A1) I005
LCD MODULE (A1) ✻ I006
CAMERA MODULE (A1) ✻ I007
DOMESHEET (A1) I008 ✻
MAIN FLEX (A1) ✻ I009
A2 = C-COVER ASSY
SLIDER (A2) ✻ I013
BALL BEARING (A2) I014 ✻
THERMO TAPE (A2) I016 ✻
MAGNET (A2) ✻ I012
C-COVER (A2) ✻ I015
SPRING LEFT (A2) I011
SPRING RIGHT (A2) I010
A-COVER (Level 3/4 only) I002
UI COVER I001
KEYMAT I003
BOTTOM FLEX I017
ENGINE MODULE INCL. PRINTED TYPE LABEL (Level 3/4 only) I020
TYPE LABEL (Level 3/4 only) I037
BACK PLATE I018
2X SCREWS M1.6x4.1 I035
4 x SCREWS M1.4x2.4 I019
2X SCREWS M1.6x7.5 I036
A4 = D-COVER ASSY
D-COVER (A4) I034 ✻
POWER KEY (A4) I031 ✻
THERMO TAPE RF (A4) I033 ✻
THERMO TAPE BB (A4) I032 ✻
SIM RETAINER (A4) I030
B-COVER I038
A3 = ANTENNA ASSY
POWER DOMESHEET (A3) I022 ✻
ANTENNA (A3) I021 ✻
IHF SPEAKER (A3) I024 ✻
ANTENNA COVER (A3) I023 ✻
MICROPHONE (A4) I029
VIBRA MOTOR ADHESIVE (A4) I026
VIBRA MOTOR (A4) I025
SYSTEM CONNECTOR ADHESIVE (A4) I028
SYSTEM CONNECTOR (A4) I027
A1= LCD SLIDE ASSY incl. A2
A2= C-COVER ASSY
A3= ANTENNA ASSY
A4= D-COVER ASSY
✻= ONLY AVAILABLE AS ASSEMBLY

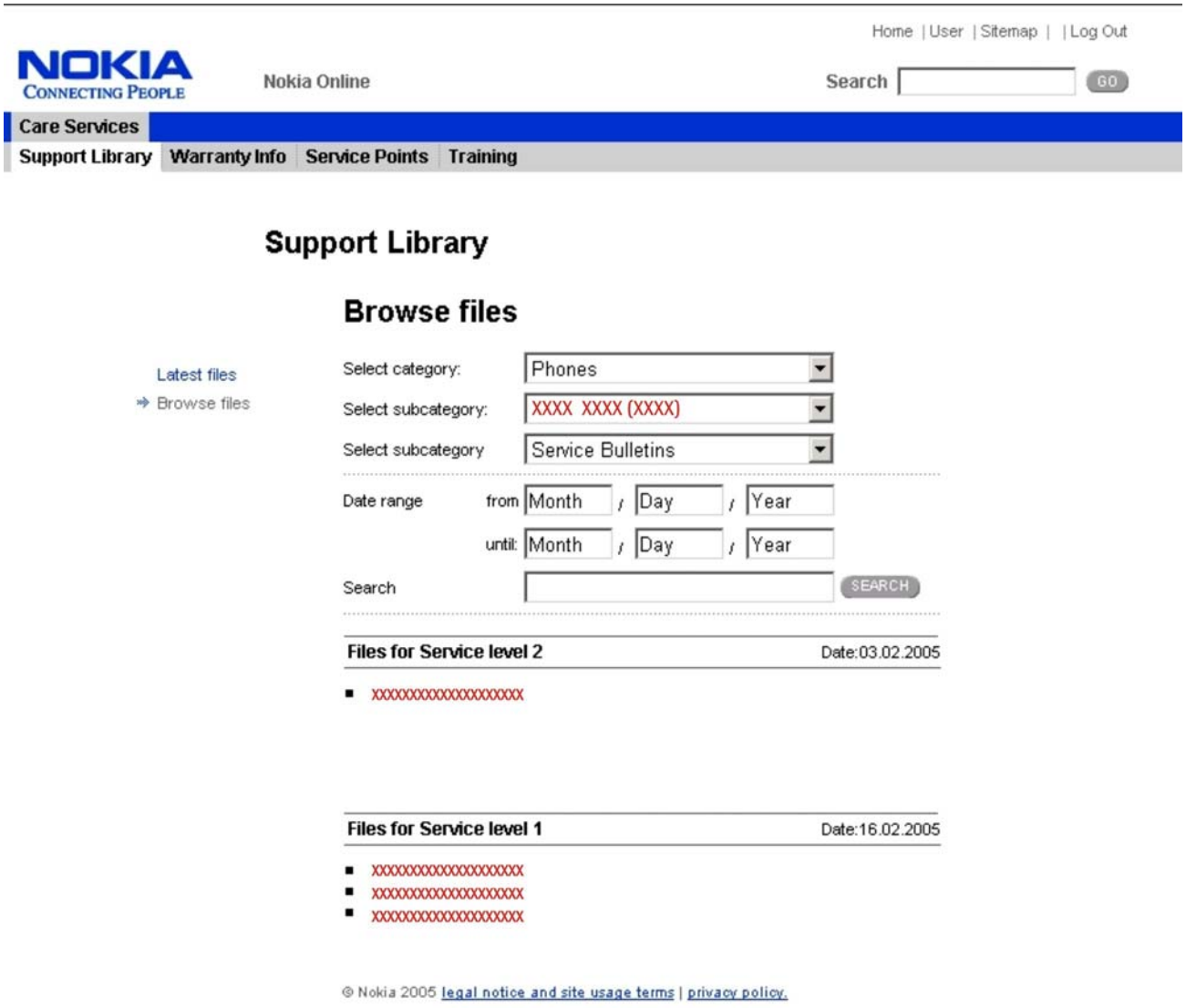
Copyright © 2005 NOKIA Corporation. All rights reserved.

6. SPARE PARTS LIST

Please exchange this page (placeholder) with latest corresponding Service Bulletins (spare parts, SWAP units and service tools) from NOL!

This will ensure, that you are using up-to-date order codes only.

Therefore Service Bulletins have to be checked from NOL on daily basis.



Copyright © 2005 NOKIA Corporation. All rights reserved.

7. SERVICE TOOLS

	FLS-4S incl. ACF-8, Driver and User Guide Dongle and flash device incorporated into one package, developed specifically for POS use. **ACF-8** Universal Power Supply is used to power FLS-4S.
	Internal Battery BL-5X Inserted under the back cover, this Li-Ion 600 mAh battery provides power in a lightweight package.
	Travel Charger ACP-12 Small and lightweight charger for fast charging of your phone battery.
	Headset HDC-5 Small and lightweight mono headset for handsfree functionality and listening to FM radio.
	XCS-1 Service Cable is used to connect FLS-4S to **SF-29** .
	SF-29 POS Flash Adapter is used in POS (Point of Sales) environment for software updating. It provides controlled supply voltage and necessary connections between the phone and the Flash Device. It substitutes for the phone's standard battery during the software update.

Copyright © 2005 NOKIA Corporation. All rights reserved.

Test Pins
for Flash Adapter **SF-29**

RJ-87
Soldering Jig

Lead-free Solder Wire
Mandatory for lead-free products (Level 2 only).

0772040 NMP Standard Toolkit

- NOKIA opening tool SRT-6 NOKIA No. 0770431
- Tonichi torque driver NOKIA No. 6901525
- Hoya micro fibre cloth MX304
- Dastex gloves S, M, XL
- Artilux goggles AH166
- Wera bit T5 867/4TX 5x50
- Wera 867/4 6IP; 50mm (Torx 6 PLUS®)
- Wera bit T6 867/4TX 6x50
- Wera 867/1 5IP; 25mm (Torx 5 PLUS®)
- Wera bit T6 PLUS® 867/4TX 6IP
- Facom side cutter 416E
- Facom T5 driver SP.14032
- Facom T6 driver SP.14033
- Facom slot screwdriver AEF. 2x35.E
- Wetec tweezers 7abb SA-ESD
- Wetec tweezers 22 SA-ESD
- Wetec tweezers 13 SA-SMD ESD
- Wetec tweezers PSF SA-ESD
- Wetec ESD brush E1211
- Kaiser Fototechnik airbrush 6315
- Wetec dental tool DEM83266/0
- RS Components Scissors 323-5732

Copyright © 2005 NOKIA Corporation. All rights reserved.

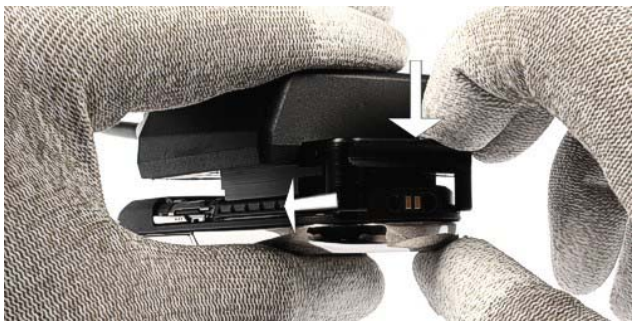
8. SW-UPDATE

Flash Concept – (Point of Sales)

To use FLS-4S Flash Dongle you have to follow the user guide inside the sales package. Please check always for the latest version of flash software, which is available on
NOKIA Online.

It is very important to follow this insertion and removal procedure, otherwise the contact pins of Flash Adapter will be damaged.

Insert the Flash Adapter SF-29 like a battery, start at the Battery Connector side.



Now, push down the bottom side of the phone and close the locking mechanic. Do not use too much force.

When removing the phone, always start from the bottom side of the unit. First unlock the locking mechanic.

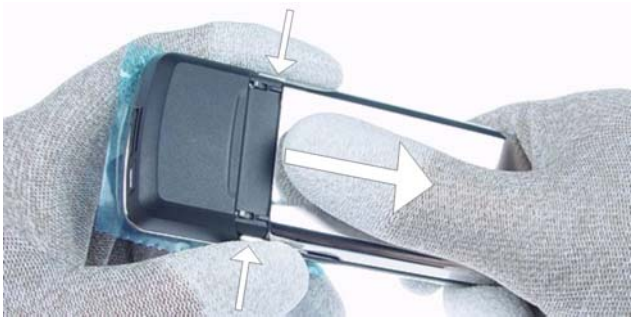
Now, take the unit away.

Copyright © 2005 NOKIA Corporation. All rights reserved.

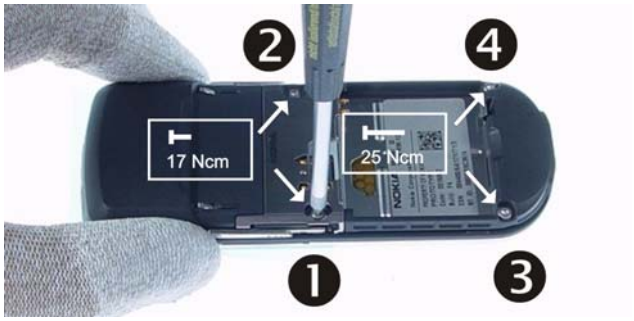
9. DISASSEMBLY INSTRUCTIONS

1.) You need the following tools.

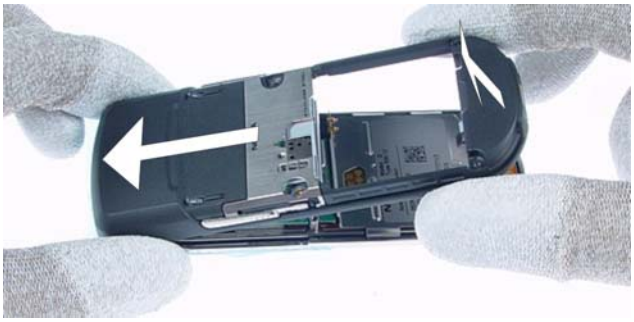
2.) Always protect the window with a plastic film.



3.) Remove the **Battery Cover**.

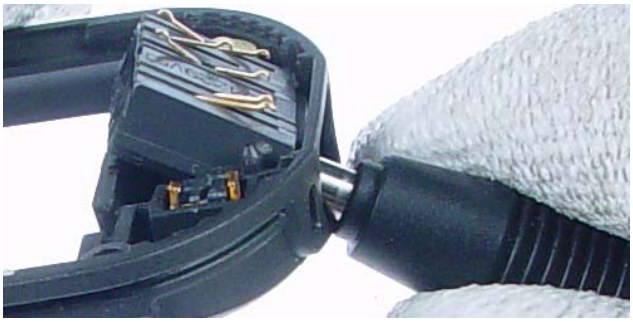


4.) Unscrew the four Torx size 6 plus screws in the shown order. Mind the different screw lengths. For Assembly use the reverse order and the following torques: For M1.6x4.1: 17Ncm, for 1.6x7.5: 25Ncm. Always use new screws.



5.) Remove the **D-Cover** by shifting it as shown in the picture carefully. Mind the sharp contact springs.

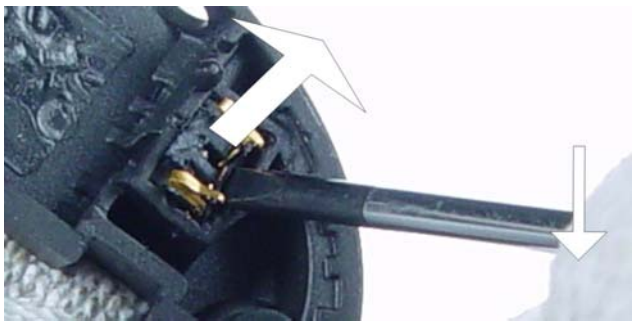
6.) Unlock the **Antenna Assy**, beginning from the left side.



7.) Use the **DC** Plug to remove the System Connector. Ensure that no adhesive remains.

8.) Lever out the **Vibra Motor** with a slotted screwdriver. Ensure that no adhesive remains.

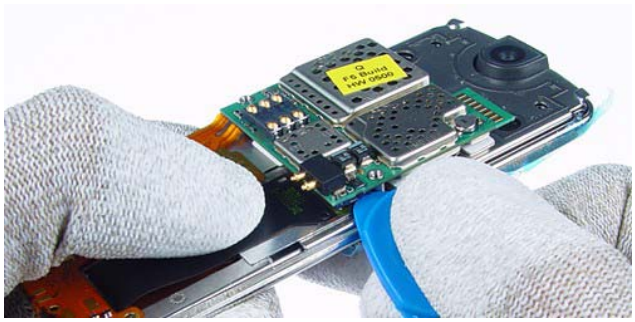
Copyright © 2005 NOKIA Corporation. All rights reserved.



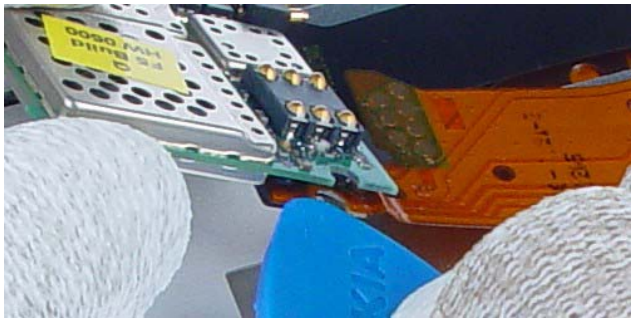
9.) Once removed, the **Microphone** can't be reused again.

10.) Unlock and remove the **SIM Retainer**.

11.) Pull up the **A-Cover.** Mind the Flex foil's components.

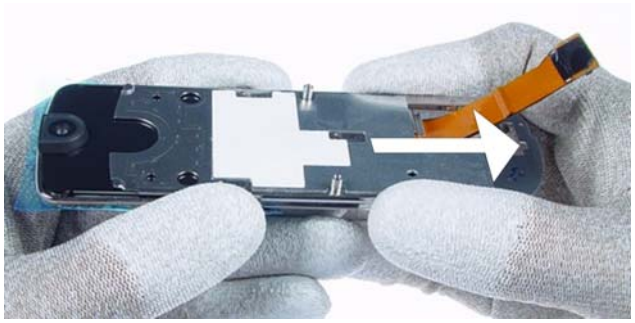


12.) Open the first flex connector of the **Engine Module** with the SRT-6.



13.) Open the second flex connector and remove the **Engine Module.**

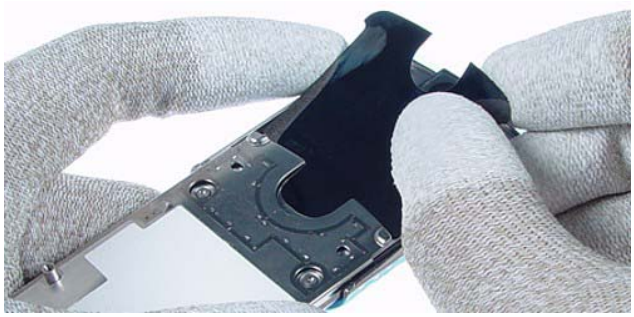
14.) Peel of the **Bottom Flex** carefully.



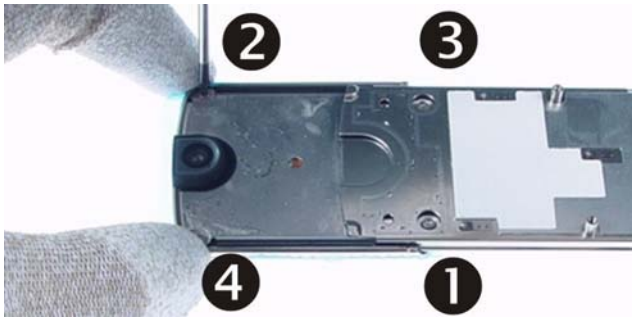
15.) Shift the **Slider** to the end position before continuing.

16.) Once released, the **Backplate** can't be reused again.

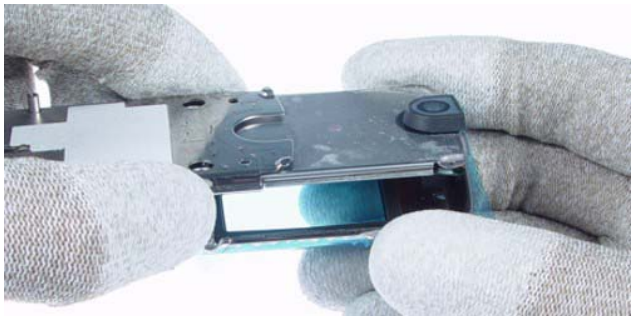
Copyright © 2005 NOKIA Corporation. All rights reserved.



17.) Peel of the **Backplate** slowly.

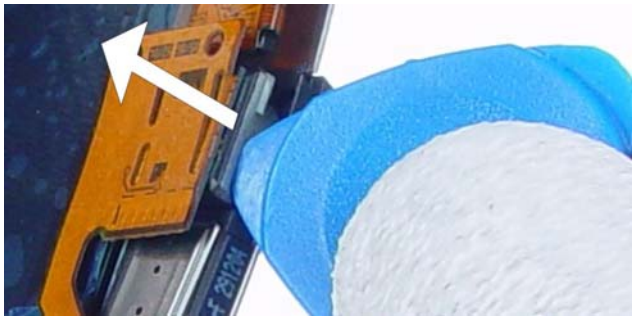


18.) Unscrew four Torx size 4 Plus screws in the shown order. For Assembly use the reverse order and a torque of 17 Ncm. Always use new screws.



19.) Remove the **UI Cover**.

20.) Protect the inner side window and the LCD with a plastic film.



21.) Carefully lever out the Camera Module with the **SRT-6**.

22.) Remove the **Earpiece** with tweezers.

23.) Pull up the **Camera Housing.**

24.) Lever out the **Keymat** with the SRT-6.

Copyright © 2005 NOKIA Corporation. All rights reserved.

25.) Carefully lift up the **Main Flex**.

26.) Peel of the **Main Flex.**

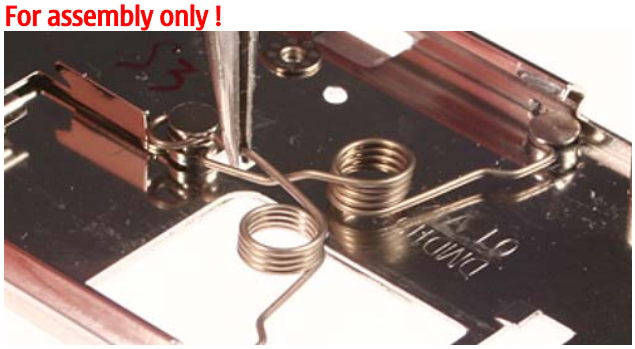
27.) Release the **Springs** from the middle pin first.

28.) Release the end loop of the **Springs**.

For assembly only !

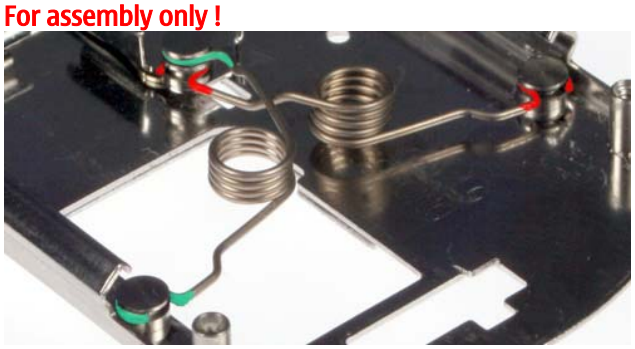
29.) Mind the correct positioning of the **Springs**. Place the lower **Spring** first.

For assembly only !



30.) Now place the upper **Spring.**

For assembly only !

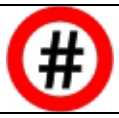
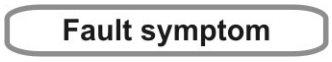


31.) Check the correct functionality of the **Springs.**

Copyright © 2005 NOKIA Corporation. All rights reserved.

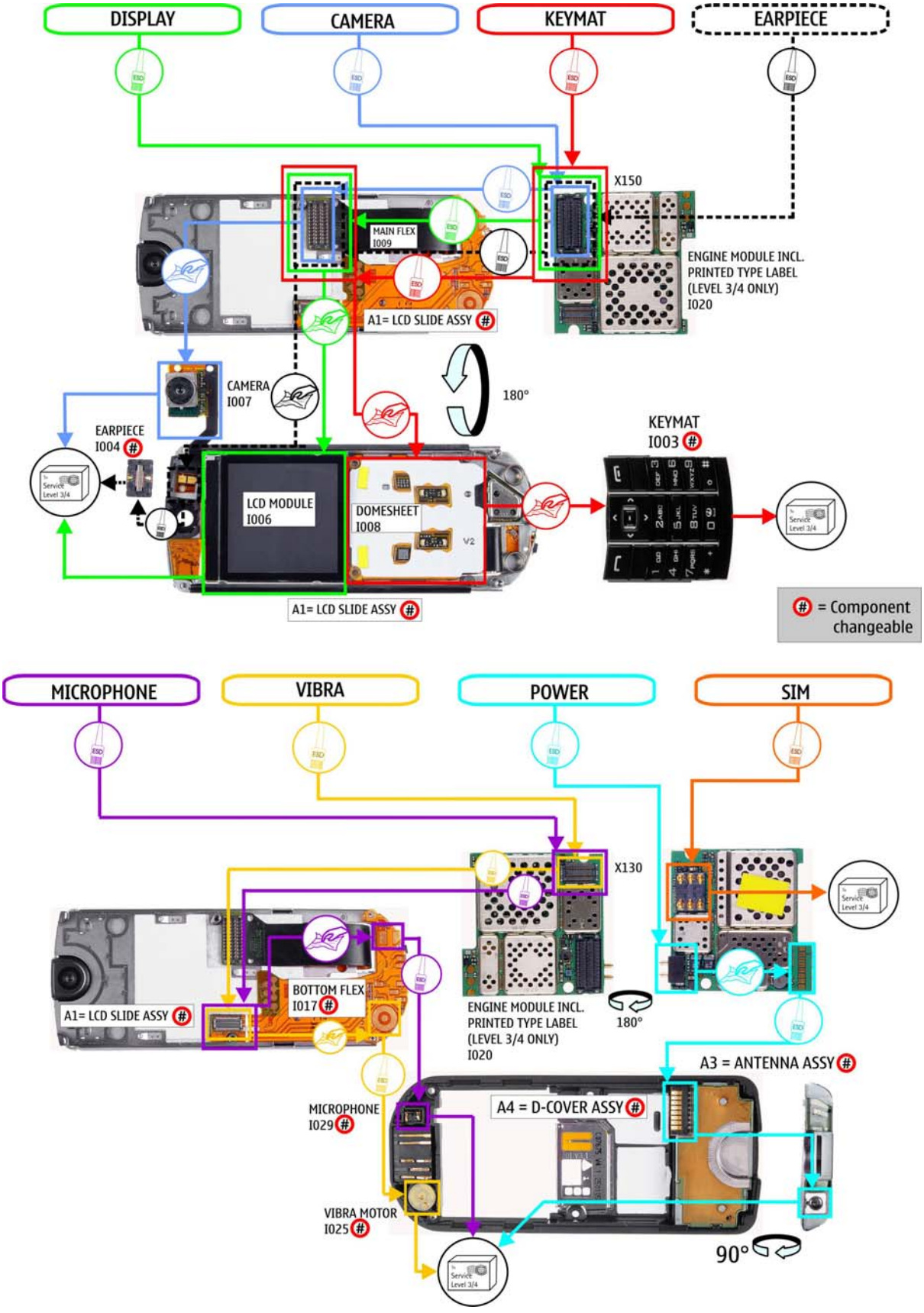
10. LEGEND FOR QUICK TROUBLE SHOOTER

This legend is valid for all parts of the **Quick Trouble Shooter**

Follow the steps until the problem is solved. If this doesn't help, you are not authorized to go forward.	
	Only marked components (e.g. I002) can be changed.
	The start point of repair activities regarding the appeared fault symptoms.
	Follow the arrows step by step
	Pads or contacts: Check optical and mechanical condition particularly regarding to corrosion. Clean if necessary.
	Measure component for electrical functionality and change, if needed. (Level 2 only)
	Pads or contacts: Check optical and mechanical condition particularly regarding to corrosion. Clean with ESD brush only, if necessary.
	No more actions possible send product to the appropriate service supplier with higher service level.

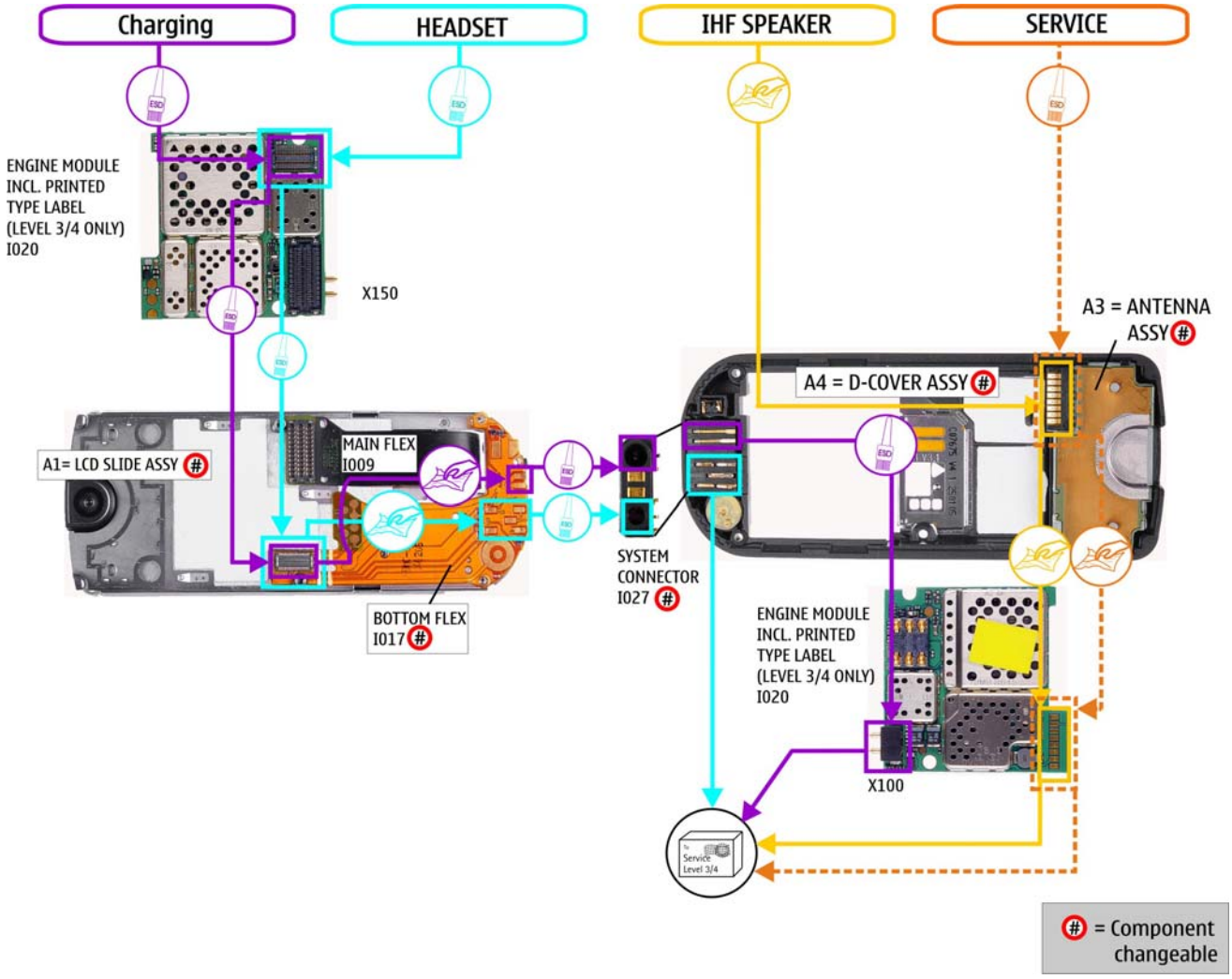
Copyright © 2005 NOKIA Corporation. All rights reserved.

11. QUICK TROUBLE SHOOTER PART 1



Copyright © 2005 NOKIA Corporation. All rights reserved.

12. QUICK TROUBLE SHOOTER PART 2



Copyright © 2005 NOKIA Corporation. All rights reserved.

13. CAMERA GONOGO TEST

Before starting the GoNoGo test, check that camera window is clean. If not, clean the window with cloth.

- Open the **Slide Cover**
- Press the button to reach the Home Menu
- From Home Menu, press the up button .
- Press **Capture** to take a photo
  This Image will be saved to Gallery into the Photos folder automatically.
  Test was successful, if the Image appears on your Display. The camera is ok.
- Select **Options**
- Select **Delete**
- Select **Yes**
- Close the **Slide Cover**

  If the test is failed see Quick Trouble Shooter.

Copyright © 2005 NOKIA Corporation. All rights reserved.

14. BLUETOOTH

Bluetooth test
You need another Bluetooth device (e.g. 6230) to do a GoNoGo test.
Make sure that Bluetooth is activated in the reference unit. The distance of the devices should be not more than 5m from each other.

Reference unit, Bluetooth activated

Test unit

Settings on the test unit:

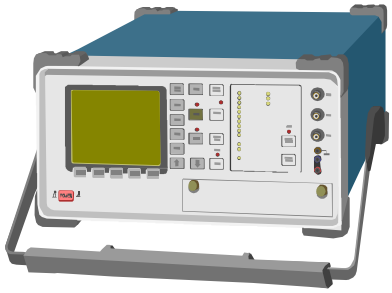
- Open the **Slide Cover**.
- Press the button to reach the Home Menu.
- Select **Names**
  If phone and SIM memory is empty, create one new entry.
- **Select** an entry and select **Details**
- Select **Options**
- Select **Send business card**
- Select **Via Bluetooth**
  If needed (for e.g. after a sw-update), enter a name for this device
  Search window appears, if all Bluetooth devices in range will be displayed, the test is successful!
- Press button to reach the Home Menu.
  Note: If the Bluetooth is activated, switch it off!

Copyright © 2005 NOKIA Corporation. All rights reserved.

15. GONOGO TEST

After the optical check, a GoNoGo test has to be carried out if the unit has been unscrewed to guarantee the functionality of the phone.

Please refer to the actual information on NOKIA Online. When using delivered tester support files, take care of the right setup according to the tester type and product type.
Please refer to "Recommended Service Equipment" on NOKIA Online.



Mobile Phone Tester

16. BATTERY TEST

A battery tester lets you test the capacity of NOKIA batteries.

Please refer to the actual information on NOKIA Online.

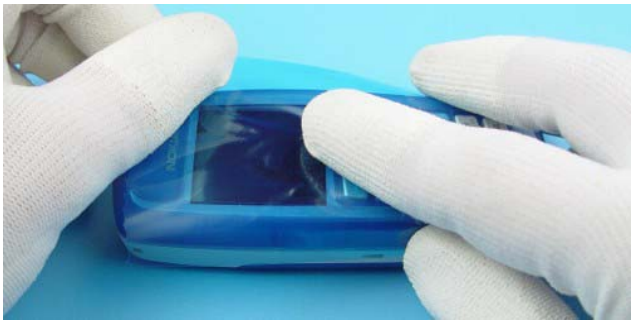
http://www.astratec.co.uk/

http://www.cadex.com/

Copyright © 2005 NOKIA Corporation. All rights reserved.

17. FORWARDING OF REPAIRS

When it is necessary to forward of repairs to appropriate service supplier with higher service level we recommend using the offered swap phone cartons as described in Spare Parts SB-004.



Always Protect the window with a protection film.

Put the unit under the stretch film.

Add repair documentation e.g. filled-in service note into the swap carton.

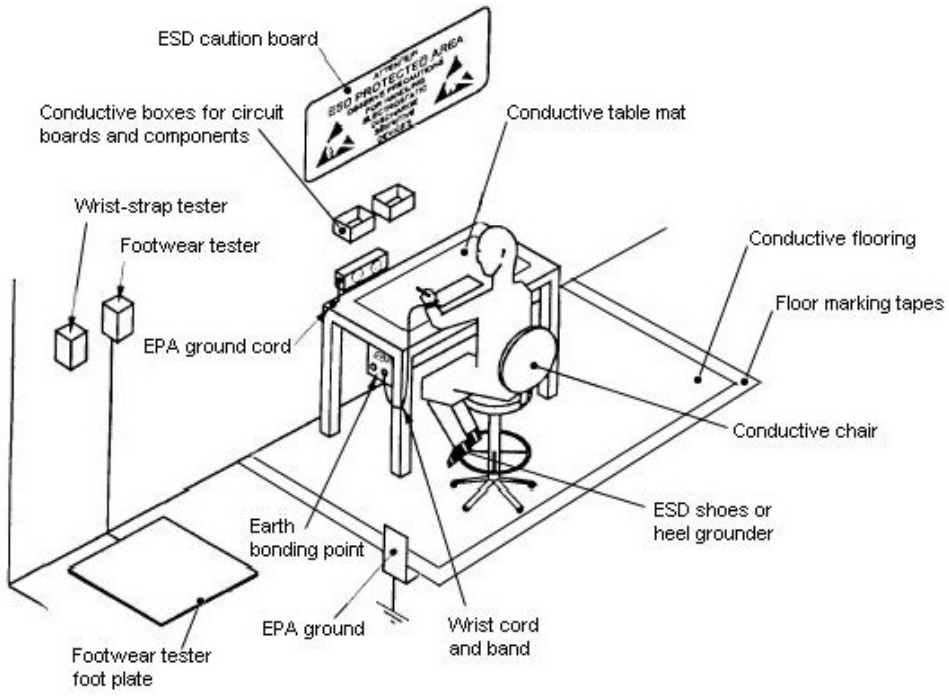
Fold the swap carton as shown in Spare Parts SB-004.

There are two different sizes of swap cartons for common mobile phones.

Copyright © 2005 NOKIA Corporation. All rights reserved.

18. ESD PROTECTION REQUIREMENTS

Please refer to the NOKIA Online document **Service Supplier Requirements** in folder General instructions.



USE Conductive bags and boxes
USE ESD compatible service tools
USE Conductive wastebaskets
USE ESD gloves when handling PWBs/PCBs
USE Cleaning material without changing el. Characteristics
USE Grounded service equipment, i.e. soldering station
USE ESD clothes such as coat or frock

NO Smoking
NO Drinking
NO Eating
NO Dust
NO Useless Items
NO Normal pressured air for cleaning modules/displays

The video covers general issues concerning Electro-Static Discharge (ESD)

Copyright © 2005 NOKIA Corporation. All rights reserved.